

REMARKS**INTRODUCTION**

In accordance with the foregoing, claims 11, 12, 19, and 20 have been amended, and claim 21 has been added. No new matter has been submitted and reconsideration of the allowability of the pending claims is respectfully requested.

Claims 1-21 are pending and under consideration.

REJECTION UNDER 35 USC §102

Claims 1-20 stand rejected under 35 USC §102(e) as being anticipated by Tomita, U.S. Publication No. 2003/0035132. This rejection is respectfully traversed.

By way of review and only an example, claim 1 sets forth:

"[a] printing apparatus to perform a printing operation by driving hardware provided thereto according to a printing command received from a user, comprising:

a firmware unit to store function information of a plurality of models of the printing apparatus, and selectively perform the function of one of the plurality of models which corresponds to a model index designated as the printing apparatus is initialized."

The Office Action indicates that Tomita sets forth all the claimed features of claim 1. Applicants respectfully disagree.

Tomita merely permits the firmware of a printer to be updated from a computer, with the computer potentially having multiple types of firmware stored in a hard drive of the computer. See Tomita in paragraphs [0122]-[0127].

As discussed in Tomita, in paragraphs [0131]-[0145], after the computer has completed initialization in operation S11, operation S17 may be initiated if a user presses a F3 key and a firmware may be transmitted to the printer controller. See operation S17 of FIG. 7.

Similarly, within the printer controller shown in FIG. 5, the CPU 201 of the printer controller 12 will only download a new firmware (replacing the previous firmware) after initialization. Here, there is first a determination as to whether a new firmware is sent to the printer controller, then a new firmware may be downloaded, stored in the hard drive 205 of the printer controller, and implemented the next time the printer controller is initialized. See FIG. 13 and corresponding [0181]-[0192].

Again, in Tomita, the specific firmware for each printer controller/printing apparatus can be stored in the PC's hard drive and selectively transmitted from the PC to the printer controller.

In interpreting claim 1, the Office Action has pointed to FIG. 3, paragraph [0071], and paragraphs [0125]-[0128], with FIG. 3 and paragraph [0071] referencing the printer of FIG. 3, and paragraphs [0125]-[0128] referencing the operation of the separate PC 90, which can transmit new firmware stored on the hard drive of the PC to the printer controller 12 for the printer 11 of FIG. 3.

Again, here, the printer 11 and printer controller 12 are separate from the PC and any firmware transmitted from the PC to the printer controller 12 is transmitted after both devices have been initialized.

Thus, though the hard drive of the PC may store multiple firmware for different printer models, the PC only transmits a new firmware to the printer controller 12 after the PC and printing apparatus has been initialized and thereafter based upon administrative input identifying the model information. See paragraph [0143] of Tomita.

Any designation of which function of the plurality of models to be selectively performed is not based on any designation "as the printing apparatus is initialized."

Further, the only function performed by the device controlling the hard drive of the PC is the transmission of the firmware from the PC to the printer controller 12, and again is not performed based on any designation "as the printing apparatus is initialized."

Here, as noted, as the Office Action relies upon the hard drive of the PC to store "function information of a plurality of models of the printing apparatus," that same PC must similarly be interpreted as performing the selective performing of "the function of one of the plurality of models which corresponds to a model index designated as the printing apparatus is initialized", and a function of the PC must be interpreted as meeting the claimed function. However, as noted above, with regard to this firmware storage, the only function of the PC is to transmit the firmware, which cannot be interpreted as reading on the claimed selective performing.

Thus, based upon the Office Action's interpretation of Tomita, neither the PC nor the printer controller of Tomita can be interpreted to disclose all the claimed features of independent claim 1.

Regardless of how Tomita is interpreted, with the hard drive of the PC storing the "function information of a plurality of models of the printing apparatus", Tomita cannot be

interpreted as also disclosing or suggesting the claimed "selectively perform the function of one of the plurality of models which corresponds to a model index designated as the printing apparatus is initialized."

Likewise, independent claim 7 sets forth:

"[a] method of supporting a plurality of models of a printing apparatus by a common firmware, the method comprising:

confirming a model index designation command which designates a model index corresponding to one of the plurality of printing apparatus models;

extracting function information corresponding to the one of the plurality of printing apparatus models which is designated by the model index designation command;

confirming a function of the designated model using the function information; and performing the function."

To disclose these features, the Office Action has again cited paragraphs [0125]-[0127] of Tomita, as well as FIG. 6 regarding PC 90.

Briefly, in addition to the above, Tomita fails to disclose or suggest a "common" firmware. Rather, Tomita sets forth only conventional separate individual firmware for each printer/controller.

Similar to above, to meet the claimed "confirming" feature, the review of a user input model information in paragraphs [0142]-[0145] of Tomita must apparently be relied upon.

However, with this interpretation, Tomita cannot be interpreted as further setting forth:

"extracting function information corresponding to the one of the plurality of printing apparatus models which is designated by the model index designation command;

confirming a function of the designated model using the function information; and performing the function."

Regarding the confirming performed in this portion of Tomita, there is no "extraction" of any function information corresponding to the one of the plurality of printing apparatus models. This portion of Tomita, as well as the Office Action relied upon portion, only sets forth that a selected firmware can be transmitted to a printer controller, not that function information corresponding to any of the printing apparatus models is extracted.

Further, there is thereafter no further confirmation of the "function of the designated model using the function information" and any "performing" of that function.

Here, as Tomita is only transmitting the new firmware as a package, there is again no need to extract any functions from a selected firmware, and also thereafter no need to perform any further confirmation of a function of the designated model using the function information, or further performing of that function.

Any interpreted "function" that is confirmed by Tomita cannot also be interpreted as being performed. As noted above, in this regard with the PC, the only apparent function would be the transmission of the firmware, which would not be confirmed and not based upon extracted function information.

If the outstanding rejection is maintained, applicants respectfully request the Examiner identify precisely which device or operation is specifically being relied upon for each claimed feature.

Regarding independent claims 11 and 12, the Office Action again relies upon paragraphs [0125]-[0126], and FIG. 6, of Tomita to set forth the claimed features.

Claim 11 sets forth:

"[a] firmware unit of a printing apparatus to control the printing apparatus, wherein the firmware unit stores function information of a plurality of models of the printing apparatus, and controls the printing apparatus according to the function information corresponding to the printing apparatus."

As noted above, the hard drive of the PC of Tomita would appear to be the only device within Tomita that could or would include any function information of any number of models. Thus, it is respectfully submitted that, since the hard drive of the printer controller of Tomita would only include a single firmware for that particular printer model, Tomita cannot be interpreted as reading on claim 11.

As noted, there is also no need or desire within Tomita to have more than one firmware within each hard drive of the printer controller. Tomita sets forth a method for updating the firmware if its needed. Independent claim 18 similarly sets forth at least "storing function information of a plurality of models of the printing apparatus in the printing apparatus.

Claim 12 sets forth:

"[a] firmware unit to control a printing apparatus, wherein the firmware unit stores function information of a plurality of models of the printing apparatus, and controls the printing apparatus according to the function information corresponding to the printing apparatus, with a storage unit to store the function information of the plurality of models, supported by a common firmware, of the printing apparatus."

In addition to the above, there is no common firmware within Tomita, or a need for the same. Likewise, claims 19-21 also set forth "a firmware" for plural models or a "common" firmware structure.

Accordingly, it is respectfully submitted that Tomita cannot be interpreted as setting forth or suggesting all the claimed features of the independent claims. In addition to their respective features and dependence on allowable claims, it is respectfully submitted that the respective dependent claims are equally allowable.

Lastly, as only an example and in addition to the above remarks, it is briefly noted that the claimed invention is different from Tomita in practice. For example, in Tomita any change or updating of the firmware of a printer must be performed by downloading the updated or different firmware to the printer from a computer, in place of the original firmware of that printer. Conversely, in such an example, the presently claimed invention would not require such an operation as the firmware for each printer could be the same and be capable of supporting various functions to be used in various models of print devices, such that each print devices would use a respective portion of the firmware corresponding to the particular model.

Thus, in addition to the above, it is respectfully submitted that Tomita and the claimed inventions are patentably distinct.

Withdrawal of this rejection and allowance of all pending claims is respectfully requested.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

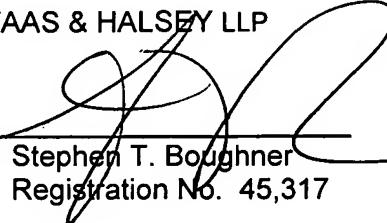
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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